

Steps to Self-Manufacturing Face Shields



- The Face shield was developed in an effort to conserve N95 Face Masks
- If worn appropriately, it can be wiped down and reused.
- The shield protects the N95 and allows it to be reused under right circumstance
- Prototypes were built by 20 corporate supply chain team members
- Through an assembly line, in 6 hours they built 1000 face shields
- Production quantities vary so the quantity was omitted; however the plastic is the rate limiting step to production
- The production is being scaled to solicit volunteers and Medical students to assemble masks over the course of the week

Materials and Sources to Create Face Shields

Material	QTY	Specifications	Vendor
Plastic Sheet	50,000	1/16" x 11" x 8" Poly Carbonate with Rounded Corners	Total Plastics Int'l – Baltimore;
Foam*	125 Rolls using 2x24x120	2" High Cushion Foam (Height & Width can vary – to be cut down to 9"x2"x1" cubes)	Amazon – FoamTouch Brand Used
Elastic Band	1,200 - Using 11 YD Rolls	1.5" Thick – Black (Other Colors can be Used) – Cut into 20" Strips	Amazon – Many Brands
Stapler – Heavy Duty	10	160 Sheet Capacity	Swingline
Staples	50,000	½" Heavy Duty Staples	Swingline
Plastic Bags	50,000	13" x 15" Plastic zip Bags	Elkay
Glue Guns	10	Regular Glue Guns – <i>not mini</i>	Amazon
Glue Sticks	1000 – 5lb Box	10" Full Size Glue Sticks	Amazon
Cutting Mats	10	24" Cutting Mats	Amazon
Scissors	10	Regular Scissors	Amazon
Razor Blades	100	12 Count Razor Blades	Amazon
Rulers	10	18" Ruler	Amazon

*1" foam was used initially, but the shield did not effectively protrude and was cumbersome when worn with eyeglasses

Plastic Sheets Cut to Specifications in Baltimore



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3.9 ★★★★☆ (7)
Plastic fabrication company

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totalplastics.com
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Materials and Sources to Create Face Shields

	Steps to Assemble
Step 1	Peel Film Off Front & Back of Plastic Sheet
Step 2	Cut Foam into 9" Long, 1" Thick & 2" High Strips
Step 3	Glue Foam Strips onto Plastic using hot glue gun. Strip should be glued on 11" side of plastic with 1" side down (effectively 2" strip should be barrier between plastic and face)
Step 4	Cut Elastic Bands into 20" Strips
Step 5	Staple elastic band on the same side of the shield that the foam was glued. The elastic band shall be folded in on itself to avoid fraying. The entire elastic band should be on the back (side towards the clinician's face) to avoid contamination with fluid
Step 6	Place finished shield in bag